

# Human Factors at the FAA

NextGEN

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## Topics

- **Agency Overview**
  - Who is who at the FAA
  - How/where does human factors fit in?
- **Human Factors Research**
  - Cross cutting, multi-modal HF issues in transportation
  - Fatigue
  - Aging
  - System Design
  - Human System Integration
  - Human Error



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## Federal Aviation Administration

- **Who is who at the FAA?**
  - Approximately 50,000 employees
  - Approximately 45,000 employees in "Air Traffic"
  - Approximately 5,000 employees on the "Aircraft" side

### Where/how does human factors fit in?

- Human Factors Division
- Individual lines of business within the FAA



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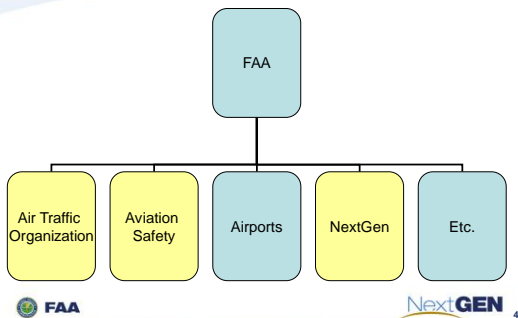
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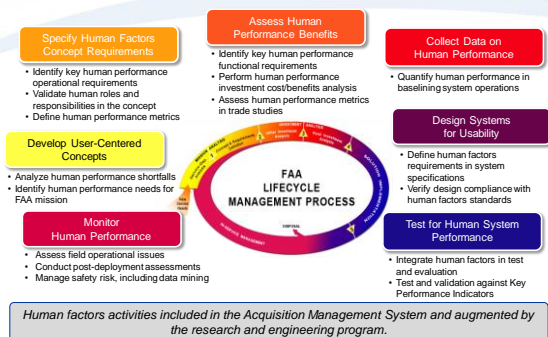
## FAA Organization



## FAA Approval Process



## Human Factors in Acquisition Engineering



## Cross Cutting, Multi-Modal Research

### Outcomes/Products:

- Regulatory & guidance material



- HF requirements for acquisitions
- Training material

### Common HF Themes:

- Integration
- Usability
- Interface
- Color
- Symbolology
- Displays
- Knobs/buttons
- Labels



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## Cross Cutting, Multi-Modal Research

### – Fatigue

- Air Traffic Controllers
- Aircraft Mechanics
- Pilots
- Flight Attendants



### – Aging

- Air Traffic Controllers
- Pilots
- Flight Attendants



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## Cross Cutting, Multi-Modal Research



### – System Design

### – Human System Integration



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## Human Error



"No! No! That's Self-Destruct! Set Distance is the one on the left."



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## Workload



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## Electronic Flight Bag (EFB) Research



Photo courtesy of Teledyne Controls.



Image from PRNewsFoto/United Continental Holdings, Inc.



Photo courtesy of Boeing.



Apple iPad  
www.apple.com



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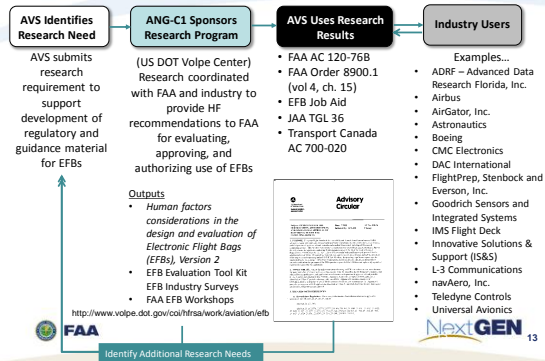
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## EFB: From Research to Reality



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